

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A droplet ejecting device comprising:

an ejector that is adapted to eject a liquid stored in a pressure chamber from an ejecting nozzle by applying pressure to the pressure chamber;

an ejection timing detector that is adapted to detect ~~a start timing at which a~~ liquid column ~~starts~~ being ejected from the ejecting nozzle;

a droplet separator that is adapted to give, to the liquid column, an energy that separates the liquid column from the liquid stored in the pressure chamber; and

a controller that is adapted to control the droplet separator to give an energy at a timing when a predetermined time period has elapsed since the ~~start timing~~ ejection of the liquid column detected by the ejection timing detector.

2. (Withdrawn) A droplet ejecting device according to Claim 1, wherein the energy is optical energy.

3. (Withdrawn) A droplet ejecting device according to Claim 2, wherein the optical energy is coherent-light energy.

4. (Withdrawn) A droplet ejecting device according to Claim 2,

wherein the optical energy comprises plural light beams traveling in different directions.

5. (Withdrawn) A droplet ejecting device according to Claim 2,
wherein the optical energy is comprises at least two light beams traveling in opposite directions.

6. (Withdrawn) A droplet ejecting device according to Claim 1,
wherein the energy is thermal energy.

7. (Cancelled)

8. (Withdrawn) A droplet ejecting device according to Claim 1,
wherein the controller sets a longer period as the predetermined time period where a volume of liquid to be ejected is larger.

9. (Withdrawn) A droplet ejecting device according to Claim 1, further comprising:

a light emitter that is adapted to emit light onto the liquid column;

a photo-receiver that is adapted to receive light emitted from the light emitter through the liquid, the photo-receiver facing the light emitter,

wherein the ejection timing detector detects the ~~start timing~~ ejection of the liquid column in response to a change in an intensity of light received by the photo-receiver.

10. (Withdrawn) A droplet ejecting device according to Claim 9,
wherein the droplet separator separates the liquid column by emitting from the light emitter a light having larger energy than an energy of the light used for detecting ~~the timing at which the liquid starts being ejected~~ ejection of the liquid column.

11. (Currently Amended) A droplet ejecting method, comprising:
ejecting a liquid stored in a pressure chamber from an ejecting nozzle by applying pressure to the pressure chamber;
~~detecting a start timing at which a liquid column starts being ejected from the~~
ejecting nozzle; and
giving, to the liquid column, an energy that separates the liquid column from the liquid stored in the pressure chamber, the energy being given at a timing when a predetermined time period has elapsed since the ~~start timing~~ ejection of the liquid column.

12. (Previously Presented) A droplet ejecting method according to Claim 11,
wherein the energy is optical energy.

13. (Previously Presented) A droplet ejecting method according to Claim 12,
wherein the optical energy is coherent-light energy.

14. (Previously Presented) A droplet ejecting method according to Claim 12, wherein the optical energy comprises plural light beams traveling in different directions.

15. (Previously Presented) A droplet ejecting method according to Claim 12, wherein the optical energy comprises at least two light beams traveling in opposite directions.

16. (Previously Presented) A droplet ejecting method according to Claim 11, wherein the energy is thermal energy.

17. (Cancelled)

18. (Previously Presented) A droplet ejecting method according to Claim 11, wherein a longer period is set as the predetermined time period where a volume of liquid to be ejected is larger.

19. (Currently Amended) A droplet ejecting method according to Claim 11, further comprising:

emitting light from a light emitter onto the liquid column; and

receiving, by a photo receiver, the light emitted from the light emitter through the liquid, the receiver facing the light emitter through the liquid column,

wherein the ~~start timing~~ ejection of the liquid column is detected in response to a change in an intensity of light received by the photo-receiver.

20. (Currently Amended) A droplet ejecting method according to Claim 19, further comprising:

increasing the energy of the light emitted by the light emitter at a timing when a predetermined time period has elapsed since the ~~start timing~~ ejection of the liquid column,

wherein the energy to be given to the liquid column is provided by the light emitted by the light emitter.

21. (Withdrawn) A droplet ejecting method according to Claim 11,

wherein the method is used for patterning one of a wiring, a color filter, a photoresist, a microlens array, an electroluminescence material, a bio-substance, and an element included in an electronic optical device.

22. (Withdrawn) An electronic optical device including an element that is patterned using a droplet ejecting method, the method comprising:

ejecting a liquid stored in a pressure chamber from an ejecting nozzle by applying pressure to the pressure chamber;

~~detecting a start timing at which~~ ejection of a liquid column ~~starts being ejected~~ from the ejecting nozzle; and

giving, to the liquid column, an energy that separates the liquid column from the liquid stored in the pressure chamber, the energy being given at a timing when a predetermined time period has elapsed since the ~~start-timing~~ejection of the liquid column.

23. (Withdrawn) An electronic optical device according to Claim 22, wherein the energy is optical energy.

24. (Withdrawn) An electronic optical device according to Claim 23, wherein the optical energy is coherent-light energy.

25. (Withdrawn) An electronic optical device according to Claim 23, wherein the optical energy comprises plural light beams traveling in different directions.

26. (Withdrawn) An electronic optical device according to Claim 23, wherein the optical energy comprises at least two light beams traveling in opposite directions.

27. (Withdrawn) An electronic optical device according to Claim 22, wherein the energy is thermal energy.

28. (Cancelled)

29. (Withdrawn) An electronic optical device according to Claim 22,
wherein a longer period is set as the predetermined time period where a volume
of liquid to be ejected is larger.

30. (Withdrawn) An electronic optical device according to Claim 22,
wherein the method further comprises:
emitting light from a light emitter onto the liquid column; and
receiving, by a photo receiver, the light emitted from the light emitter through the
liquid, the receiver facing the light emitter through the liquid column,
wherein the ~~start timing~~ ejection of the liquid column is detected in response to a
change in an intensity of light received by the photo-receiver.

31. (Withdrawn) An electronic optical device according to Claim 30,
wherein the method further comprises:
increasing the energy of the light emitted by the light emitter at a timing when a
predetermined time period has elapsed since the ~~start timing~~ ejection of the liquid
column,
wherein the energy to be given to the liquid column is provided by the light
emitted by the light emitter.